

REMARKS

Claims 1 and 3-9 are pending.

Claims 1-7 have been rejected under 35 U.S.C. § 102(e) as allegedly being unpatentable over Sato (US '956).

Applicants respectfully traverse the rejection and submit that US '956 does not disclose or render obvious the positive resist composition of the present invention.

A feature of the present invention is that it employs a blend of resins each comprising a repeating unit represented by formula (A1) or (A2), the resins having glass transition temperatures different by 5 °C or more so as to attain the effects of the invention. The effects of the invention are not demonstrated by simply blending two kinds polymers each containing the unit of formula (A1), and the present invention specifies as an indispensable condition that the difference in the glass transition temperature between the two kinds of polymers is 5 °C or more. That is, it is not sufficient that each of the resins to be blended may simply contain the unit of formula (A1). The invention is not thought to be so simple as to apply the monomer of formula (A1) to each of two kinds of resins as the Examiner indicates. The resist composition of the invention cannot easily be expected from the cited reference even by persons skilled in the art.

Contrary to the Examiner's assertions, the resist composition of the present invention cannot be achieved by simply blending two kinds of polymers each containing at least one repeating unit of formula (A1). Specifically, as pointed out in the Response under 37 C.F.R. § 1.116 previously filed on July 5, 2006, the present invention is a positive resist composition comprising at least two resins, a first and a second resin, in which each of the first and second

resins comprises at least one repeating unit selected from a group consisting of repeating units represented by formula (A1) and (A2), and the difference in glass transition temperatures between the first and second resins is at least 5°C. US '956 does not disclose or suggest the combined use of two resins, each comprising at least one repeating unit represented by Applicants' formula (A1) and (A2), where the difference in the glass transition temperatures between the first and the second resin is at least 5 °C. Therefore, one of ordinary skill in the art would not arrive at the claimed invention based on the teachings of US '956.

As the Examiner recognizes, there is not a disclosure entirely the same as the invention in the cited reference (US 6,824,956) pointed out by the Examiner, nor a description related to the glass transition temperature, which is an important point of the present invention. US '956 does not disclose all the elements of the claimed invention. The examples of US '956 do not disclose that each of the resins in the resin blend includes a repeating unit represented by the formula (A1) or (A2) or that a first resin has a glass transition temperature different from a second resin by at least 5°C. In particular, the resins disclosed in US '956 do not anticipate the repeating unit represented by (A1) as recited in the present claims. In US '956, the examples of the synthesized resins of formula (I) only show an alkylene group with 3 or more carbon atoms at the R₂ position (columns 77 to 81). That is, in the polymer of US '956, it is pointed out that a greater number of carbon atoms, greater than 1 or 2, for R₂ is preferable. For example, the group “-CH₂CH₂CH₂CH₂OCH₃” in the leftmost unit of resin (1) disclosed in columns 77 and 78 of US '956 does not meet R of formula (A1) in the present claim 1, since R is an alkyl group limited to 1 or 2 carbon atoms. In the resin of the present invention, the carbon number in the

corresponding portion is limited to 2 or less so that the basic concept of resin design is entirely different between the present invention and US '956. Also there is no description of the control method of the specific glass transition temperature in US '956 so that it is difficult even for persons skilled in the art to know by analogy from the disclosure of US '956 that the polymer corresponding to the invention is effective for the use of the invention. Therefore, all elements of claim 1 are not met and US '956 cannot be said to anticipate or render obvious the present invention.

In addition to the above, a major application of the claimed invention is as a resist for thermal flow applications. The claimed recitation regarding the difference in the glass transition temperature of at least 5°C was found to exhibit specific effects in terms of the thermal flow properties. As such, a positive resist composition comprising at least two resins, wherein the first resin has a glass transition temperature different from that of the second resin by at least 5°C cannot easily be discovered based on the disclosure of US '956 where there is no description related to the thermal flow.

In order to set the glass transition temperature at the claimed value, it is necessary to adequately select the monomer species, molecular weight, and degree of dispersion as described in the present specification, but there is no description in US '956 that suggests selection of such features. US '956 only provides a general description related to the formula (A1), no description related to the difference in the glass transition temperature and no specific disclosure as to how to select monomer species, molecular weight, and degree of dispersion. In view of the lack of relevant disclosure in US '956, even follow-up experiments would be impossible.

Appln. No.: 10/801,723
Amendment under 37 C.F.R. § 1.114(c)

In view of the foregoing, Applicants submit that the present invention is patentable over Sato. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 1-7 based on Sato US '956.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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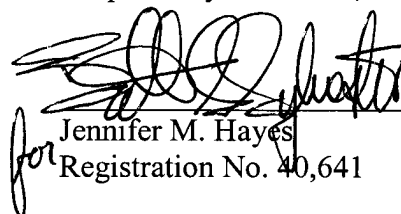
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